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V.—On Verb-Reduplication as a Means of Expressing Completed Action.

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IT is a matter of no little surprise that in all that has been written upon Indo-European Philology during the last thirty years, we can nowhere discover any full treatment of Verb-Reduplication. In the "Comparative Grammar" of Bopp, the "Compendium" of Schleicher, the "Moods and Tenses" of Curtius, and the "Doppelung" of Pott, we may find attempted and partial explanations of it, but nowhere can be found any full and satisfactory discussion of the rise, the function, and the history of this form. The tense-formations of later growth have been quite critically analyzed, and their origin and primitive significance have been determined with considerable accuracy; yet so little has hitherto been done upon this form by those best fitted to tell us of its history, and so many elements of yet doubtful origin enter into its composition, that it is with no little diffidence that we venture to lay before this Association the results of our examination of the subject.

It is not our purpose to discuss the whole subject of verb-reduplication, but to speak only of the *genesis*, the *history*, and the *decay* of reduplication as a means of expressing completed action, alluding to the general subject of reduplication only so far as it may serve to elucidate our more limited theme. For the sake of greater clearness we may at the outset be permitted to state what we hope in this paper to accomplish. We shall endeavor *first*, to explain the origin of this reduplicated form, and how it came to possess the signification of completed action; *secondly*, to note its rapid growth and extension; *thirdly*, to trace its subsequent history and decay, that is, to show to what extent this form lost its original signification of completed action and to what extent the form itself decayed; and *fourthly*, to show by what new forms it was afterwards wholly or in part supplanted. We shall be compelled to limit ourselves to a part

of the Indo-European field, and shall, therefore, choose as the basis of this paper those branches of our family which best illustrate our subject—the Sanskrit, the Greek, and the Latin.

First, then, let us enquire into the *origin* of verb-reduplication. In all languages we may find abundant illustrations of the principle that the repetition of a root, stem, or word adds emphasis to the expression—a principle which extends to all parts of speech. In Sanskrit, for example, the root *lū* (Gr. λύ-ω) means ‘to sever,’ and *lolū* for *lulū*, ‘to sever completely.’ Even in adverbs and prepositions we find examples of it: e. g. *upari* (Gr. ὑπέρ) means ‘up’ or ‘above,’ and *uparyupari* (for *upari upari*) means ‘higher and higher,’ or ‘wholly up,’ or ‘above’; while the word *adhas* on the contrary means ‘down,’ and *adhas adhas*, or by euphonic combination *adhōdhas*, means ‘wholly down.’ We discover an illustration of the same principle in the Latin personal pronouns, *meme*, *tete*, *sese*; and in the general relative *quisquis*, corresponding to the Sanskrit *yas yas*, which, however, is usually accompanied by the correlative *sas sas* (as in Nalus v. 12, *yam yam hi dadṛṣe teshān tan tam meme Nalan nṛipam*, ‘for whomsoever of these she looked upon, this one she thought to be prince Nalus’); also in the relative adjectives *qualisqualis*, *quantusquantus*, *quotquot*. We give these examples because the whole word is in each case repeated, and because the principle involved is evident. Hundreds of words might be easily adduced at the basis of which lies the same principle, words which, however, have undergone euphonic changes, so that they are not readily recognized as reduplications, and of which the original intensive force has been lost. In all such cases the original purpose evidently was to give increased emphasis to the expression.

Very early the primitive Aryan people began to employ this method of strengthening their verbs. In the mother tongue the reduplication consisted of nothing less than a repetition of the whole root; but in course of time the form began to decay, and in the different branches of the family we find only representative elements of the root repeated. The original reduplication, e. g., of *vid* ‘to see’ was *vid vid*, and to

this was added the root of the personal pronoun *ma*, restricting the action of the verb to the first person. From this radical stage it passed into the agglutinative and became united as *vidvidma*. Now the first syllable may be called the reduplication, the second the root, and the pronoun the termination. The language afterwards passed into the inflectional stage, in which further changes and modifications were made, modifications which tended to distinguish the primary root, as the bearer of the meaning of the word, from the reduplication and the termination. Thus *vidvidma* became, by strengthening the root and by curtailing the reduplication and termination, *vi-void-a*. Thus the reduplication dwindled down to those representative syllables which we find in Sanskrit, Greek, and Latin.

This reduplicated form did not at the outset assume the functions of a perfect, i. e., a tense expressing completed action. It was simply a present, existing side by side with the simple present, but expressing, however, intensive action. This is the origin and explanation of those reduplicated presents which we find in Sanskrit, Greek, and Latin : e. g., Skr. *dadāmi*, Gr. δίδωμι; Skr. *dadhāmi*, Gr. τίθημι; Skr. *jājanmi*, Gr. γίγνομαι, Lat. *gigno*. All such were without doubt originally intensive verbs. Even in later times, when the Sanskrit formed new intensives, it always did so by reduplication, as if still recognizing this primitive method. The Greek also has not a few intensives of later origin formed in the same manner, as e. g. from the root φαν 'to shine' we get the Epic φανφαν or παμφαν, 'to shine brightly,' (παμφαίνῃσι, Il. v. 6); from πνν 'to breathe,' ποιπνύω 'to puff' or 'breathe with exertion' (Il. 8, 219). We can readily see how these old intensive presents in the mother tongue would gradually assume the idea of completed action. Bopp says, and his remark is quoted and approved by Curtius in his *Moods and Tenses* : "Die Reduplicationssylbe bezweckt bloss eine Steigerung des Begriffs, gibt der Wurzel einen Nachdruck, der von dem Sprachgeist als Typus des Gewordenen, Vollendeten, im Gegensatz zu dem erst im Werden Begriffenen, noch nicht zum Ziele Gelangten, aufgefasst wird" (Vergleichende Gram-

matik, s. 749). Schleicher in his *Compendium* says substantially the same thing: "Die function der verdoppelung ist stäts im algemeinen die der steigerung, welche aber ser verschiedene, später gesonderte beziehungen umfasst, so z. b. die intensive und iterative beziehung, welche sich später in den verbis intensivis entwickelte; dise beziehung ist den reduplierten aoristen noch deutlich warnembar. Die beziehung der dauer bezeichnet die wurzelverdoppelung in den reduplierten praesensstämen; die der vollenteden handlung im perfectum" (*Compend. der Ind. Ger. Spr.* s. 716). Although they recognize this change of signification from intensive to completed action, yet they do not attempt to explain how this change may have occurred. Although Bopp's statement that "reduplication gives emphasis to the root which the spirit of the language regarded as a type of that which is done," enables us to conceive how this change may have come about, and though the mere mention of the authorities already cited may be sufficient on this point, yet we may be permitted to offer one or two suggestions in further elucidation of it.

In the first place, reduplication may imply completion from the fact that the repetition of an act implies that it has been already once done. We might illustrate this from the repetition of ἀλλος in such frequent use in Greek: e. g. ἀλλος ἄλλο λέγει, literally, 'another says another thing,' which implies that some one has already said something, and hence is properly rendered 'one says one thing, another says another thing.' This case is somewhat different, to be sure, but may it not serve to illustrate how a repetition may imply that the act has already been done, and thus connect with the repetition of a verbal-root the idea of a completed act? For the assertion that an act is taking place a second time is virtually an assertion that it has already taken place once.

Again, intensity of action, the original signification of this reduplication, also implies completion. No element of action is more indicative of completion than intensity. Whenever we see a man bending to a task with the utmost intensity, we say the work is as good as done. In the case of the verb, may the mind not have passed from the action itself over to

the result, to the completed act suggested by this intensity, and thus the verbs of completed action have been derived gradually from these intensive verbs?

This then we take to be the origin of this reduplicated tense, a tense denoting present completed action, or as we call it a perfect tense. Moreover, this was, we assume, one of the earliest, if not the very earliest form made use of by the primitive Aryan people for expressing the relation of time, for no other tense is so simple in its structure nor gives evidence of a greater antiquity, except perhaps the uncompounded aorist, the so-called second aorist in Greek, the aorist in *am* in Sanskrit. All the other tenses bear evidence of later formation, many even of having been formed on separate Indian, Hellenic, or Italian ground. This form, however, must have become fully established as a tense for denoting completed action before the original separation of the family, since we find it bearing this signification in the earliest literary records of each of the branches, Old Indian, Old Bactrian, Grecian, Latin, German, and in the Celtic (remnants). The Letto-slavic alone has preserved no trace of it. This form, moreover, must have already passed through the radical and agglutinative into the inflectional stage before the separation; for in the oldest records of each of the branches we find it already reduced to the same or nearly the same form that it presents in the classical periods.

Let us now briefly trace its subsequent history in the Sanskrit, the Greek, and the Latin.

I. In *Sanskrit*. The Sanskrit inherited from the mother tribe the above method of forming the perfect tense, a tense which had already become distinguished in both form and meaning from the class of intensives from which it took its rise. In regard to it two assumptions may with apparent safety be made. *First*, in the earliest period of the history of the Sanskrit-speaking people this reduplicated form was the only one used for expressing completed action. Other forms sprang up later, as we shall see, but they all bear evidence of having been formed on Indian ground. *Secondly*, at this early period also this form had probably the signification of completed

action only, and did not until later assume those other functions which it performed in its subsequent history. For, had it already taken on its later offices while the language was one, we should expect to find evidence of such use in the early Greek also. Very early, however, it began to lose gradually its own proper signification, and with decay of form dwindled down in meaning to a mere past tense in narration. This had gone on to such an extent that, although the reduplicated form was preserved in constant use in the latest literary period, yet its prevailing signification in the classical era was not that of a perfect but of an aorist. The three preterit tenses—the imperfect, the aorist, and the perfect—seem to have been handled very capriciously, and in their use no apparent distinctions seem to have been observed.

We next have to ask what new forms arose to assume the functions cast off by the reduplicated perfect? For never since the Aryan people first formed the conception of completed action have they once surrendered it, but they have always had some form, either synthetic or analytic, by which to express it. The Hindus supplied its place by several new formations, and to these we wish now to direct your attention. For sake of clearness they may be spoken of under six different heads.

1. Very early there arose what Sanskrit grammarians call the Periphrastic Perfect, formed by making of the verb root an abstract noun in *ām*, and affixing to this the reduplicated perfect of one of the auxiliary verbs, as ‘to be,’ *bhu* ‘to be,’ or *kṛi* ‘to make’ or ‘to do.’ Thus of *īś* ‘to rule’ is formed the abstract noun *īśām*, and to this is added the perfect *āsa*, *bahūva*, or *cakāra*, giving *īśāmāsa*, *īśāmbabhūva*, or *īśām-cakāra*, the first two of which may be rendered ‘I have been ruling,’ and the last ‘I have done ruling’ or ‘I did rule,’ using the verb ‘to do’ as the Germanic branch did at a later date for the formation of a similar compound past tense. Here in each case the idea of a perfect lies in the reduplicated auxiliary verb. This was the method of forming the perfect of roots beginning with a long vowel and of those of more than one syllable, including derivatives, such as causals, desidera-

tives and frequentatives. The purpose was evidently to avoid the ambiguity connected with the reduplication of a long initial vowel, and the difficulty of reduplicating polysyllabic stems. We may trace this form back to its very origin—a thing we are rarely able to do in the history of a verbal form. It occurs for the first time in the Atharvan, confessedly by far the most modern of the four Vedas, and here it occurs but once (*gamayām cakāra*, A. V. 18, 2, 27). Wherever those verbs, which in later Sanskrit require this form, are found in the earlier Vedas, they always have the simple reduplicated perfects.

2. Usually when the completion of an action is to be expressed we find an analytic form, a perfect participle in *tas* (Greek *τος*, Latin *tus*) used with the present of the verb *as* 'to be' (Greek *ἔσ-τι*), and the agent expressed by the instrumental case. Thus to say 'Thou hast seen Nalus' we should have *Nalas tvayā drishtas asti*, or by euphonic combination, *Nalas tvayā drishto 'sti*, 'Nalus by thee having been seen is,' equivalent to the Latin *Nalus a te visus est*. The auxiliary, however, is seldom expressed, and we find the above in Nalus ix. 29, *Nalas tvayā drishtas*. This form, as well as that in *tus* in Latin, probably acquired the signification of a perfect somewhat in the following way. The demonstrative pronominal ending *tas* added to the root of a verb expresses the result of its action and implies that the action is already finished. Thus *dictum* in Latin expresses the result of the root *dic*, and *dictum est* means 'there exists the result of the root *dic*,' or in other words 'the saying has already occurred,' or 'it has been said.' Again *amatus est* means 'he is a loved object,' a result of the action of the root *am*, implying that the action has already been exerted, i. e. some one has loved him and he is now an object loved, or 'he has been loved.' And how often we meet these perfects passive when we are in doubt whether to translate them as presents or perfects, 'he is loved' or 'he has been loved.' They both amount to the same thing. In this manner do we explain the origin of the perfect passive in Sanskrit. This analytic perfect is in constant use in classical Sanskrit in every species of composition.

This perfect passive participle occurs, in fact, nearly as many times as all other verbal forms put together, used not only where it supplies the place of the indicative perfect, but as often where the context requires the auxiliary of other moods. The precise tense and mood is often left to be inferred from the context, making the whole structure of the sentence loose and indefinite, and often, to the Greek and Latin scholar, provokingly so. Indeed it is calculated to astonish one, after having spent many weeks, perhaps months, in endeavoring to master the numerous classifications and moods and tenses of the Sanskrit verb, to find how few are the forms he is destined to meet in his reading. The whole treatment of the verb, the very soul of a language, is bald indeed when placed beside that of the Greek and Latin, and in fact the whole language, as a mode of expressing thought, will not suffer a moment's comparison with either of these languages; and it is surprising that western scholars, misapprehending the true sources of its value to philology, have, in imitation of the extravagant expressions of that eminent Orientalist, Sir William Jones, asserted again and again its superiority in this respect to the classic tongues of Greece and Rome.

3. The perfect is rendered frequently by this same participle in *tas* in agreement with the subject of the verb—a construction which is not unknown to the Greek and Latin; but in the excessive use of compounds in Sanskrit, in which nouns, adjectives, prepositions, conjunctions, and participles are all dovetailed together, this use of the participle is so frequent, where in Greek and Latin we should find a perfect, that it is deemed worthy of a separate mention.

4. With neuter verbs this same participle is used in impersonal constructions. Thus to say 'Thou hast gone' we have *gatan tvayā asti*, 'it has been gone by thee,' or usually without the auxiliary, as in the Episode Savitrī, v. 19, *gatan tvayā*. This use is similar to such Latin expressions as *ventum est*.

5. With neuter verbs the passive use of this participle is limited to the foregoing impersonal construction; but, unlike the Latin, these same participles in *tas*, of these same neuter

verbs, are often employed personally with an active meaning. Thus this same expression, 'Thou hast gone,' may be rendered personally, *gatas asi* or by euphony *gato 'si*, equivalent and similar to the German *du bist gegangen*, as in Nalus xii. 13, we read: *kva nu rājan gato 'si? quone, rex! profectus es?* 'whither, O king, hast thou gone?' The last four forms are, it will be observed, of like origin, and are perfects by virtue of the participles, as already explained.

6. One other form remains to be noticed, and it is a case worthy of careful analysis. It is formed by a perfect active participle and the present of the auxiliary verb *as* 'to be.' This participle of the verb *kṛi* 'to do,' is *kṛitavān*, and *kṛitavān asmi* means 'I have done,' as in *Urvasī* we find *api dṛiṣṭavān asi mama priyām*, 'art thou having seen my beloved?' or 'hast thou seen my beloved?' Let us now analyze this form and see by virtue of what elements it has acquired this signification. It is composed of three elements, *kṛi* the verb root, *tas* the ending added to form the perfect passive participle, and *vān*. This latter comes from the suffix *vant*, nominative singular masculine *vants*, denoting 'possession,' which by the rules of euphony becomes *vān*, a change not unlike that by which in Greek the participle *λυορτε* by omission and vicarious protraction becomes *λύωρ*. This is often added to nouns to form adjectives of possession, e. g. *dhana* 'riches,' *ghanavān* 'one possessing riches,' 'a rich man.' Adding to this the stem of the perfect passive participle we get *kṛitavān*, which originally signified precisely what the individual elements of which it is composed mean, namely, the present possession of the object in the condition specified by the participle. But this participle in *tas*, as we have already shown, implies a past action viewed as completed, and the statement of the possession of an object in the condition of completion denoted by the participle came in time to be accepted as expressing the completed act by which it was brought into that condition. The basis upon which a perfect tense has been reared is not the element of possession, as some would seem to imply (see Schleicher's *Compendium*, § 218, ed. 1870), but rather, just as in the second class discussed, the idea residing in the par-

ticiple. The same is true of those modern analytic perfect formations made up of the perfect passive participle and an auxiliary verb denoting possession; and *kṛitavān asmi* might be thus rendered *factum habeo*, *j'c l'ai fait*, *ich habe es gethan*, and *I have done it*. There is no mysterious virtue in this auxiliary *have* by the influence of which this phrase becomes a perfect. There has been in each case a transfer of the centre of gravity from the declaration of the condition of completion inherent in the participle to the declaration of the antecedent act implied in that condition. When once this formation had become established as an expression of completed action, and the step by which it attained this position had been forgotten, then the auxiliary laid aside its original functions as a separate part of speech, and, becoming a mere formative element, assumed the burden of representing the perfect tense, and by its aid there were formed from analogy other classes of perfects where etymological analysis would find only nonsense, as *uktavān asmi* 'I have said,' where there is no idea of possession, and as *bhūtavān asmi* 'I have been,' where not action, but simply state or condition is denoted.

Thus we have seven (or really four distinct) formations for expressing completed action in Sanskrit. We would not be understood to assert that all these changes took place chronologically as we have treated of them. Whether the reduplicated perfect first began to decay, to lose its signification, and these analytic forms in consequence sprang up to supply its place, or whether these analytic forms began to rise and usurp the functions of the reduplicated form, and this in consequence began to yield the field—which was the cause and which the effect, which the antecedent and which the consequent, we do not pretend to say; it is more probable that the two processes went slowly on side by side and are not to be sundered. We simply state the facts as found recorded in the literary records left us by the Sanskrit speaking people, classifying as we have simply for convenience and a more perspicuous presentation of the subject.

II. In *Greek*. The whole history of this form in Greek

may be told in a very few words. The Greek inherited from the mother-tongue the method of forming a tense for completed action by reduplication and preserved it intact to a greater extent than any other branch of the family. Just two remarks are all that is called for under this head.

1. The Greek perfect has shown remarkable tenacity in holding to the idea of completed action. In this respect it stands unique in the history of the Indo-European verb. It has kept strictly within its own province, and has not, like the Sanskrit, dwindled down to a mere historic past, entering thus the domain of the aorist and assuming its functions.

2. Not only has the Greek reduplicated perfect kept its own province, but, on the other hand, it has allowed no other forms to enter and rob it of any of its functions, as the Sanskrit, which has been, as we saw, robbed of all its original possessions. Throughout all the periods of its history, from the earliest Epic to the latest Attic forms, it knows no other means of expressing completed action. Even the circumlocutory forms used in the moods of the middle and passive voice, and sometimes for euphonic reasons elsewhere, are, unlike the similar analytic perfects in Sanskrit and Latin, formed with a reduplicated participle in which lies the idea of completed action. Whatever then may be the explanations of the new forms in κ , and those with σ in the Middle Voice, we yet feel confident in stating that no element ever entered into the Greek verb to denote completed action except the reduplication originating as already explained.

III. In *Latin*. The Latin also, after its separation from the mother tongue, continued to form its perfects in the primitive way by reduplication. Unlike the Sanskrit and the Greek, however, where the form remained intact, here in Italic speech the form itself began early to decay, so that in the literary language we find only remnants of it. The verbs in which these remnants are found may be divided into four classes.

1. Some less than thirty verbs still retain the old reduplication, as *peperi*, *tutudi*.

2. About an equal number have a short stem vowel

lengthened in the perfect, the result of a contracted reduplication : as *lēyo*, *lēlēgi*, *lēlēgi*, *lēlēgi*, *lēgi*; *vēnio*, *vēvēni*, *vēvēni*, *vēvēni*, *vēni*.

3. Somewhat less than fifty have the vowel unchanged in the perfect, being already long : as *cūdo*, *cūdi*; *īco*, *īci*.

4. The compounds of the above classes, which suffer some euphonic changes, complete the list of perfects in *i*. All of these are perfects by virtue of an original reduplication.

Let us notice now the new formations which sprang up to assume the functions of the perfect when this method had fallen out of use. We may speak of three classes.

1. Perfects in *si*, as *scrip-si*, *rex-i* (*reg-si*), etc., about one hundred in number. Bopp was the first to explain these as compounds of *esi*, a perfect of the root *es*, 'to be.' This view has been quite generally accepted by scholars, but none have attempted to show by virtue of what this *esi*, and in consequence the forms compounded of it, became perfects. In his later writings Bopp himself struck these forms out of his list of perfects, but tried in vain, as it seems to us, to find some intimate relation between them and the Sanskrit aorist in *sam*, *sīs*, *sīt*. No attempt had been made to give a complete and satisfactory explanation of this form until last year, when, before this Association, Professor Harkness, in his critical paper "On the Formation of the Tenses for Completed Action in the Latin Finite Verb," presented an extended analysis of it based upon the theory that *esi* is itself a reduplicated perfect. No other theory that has been yet put forth can account for all the elements entering into this difficult and almost inexplicable form. Accepting this view, we explain the perfect in *si* as a perfect by virtue of the auxiliary, which is itself a reduplicated perfect of the root *es* 'to be'; and thus, as far as the element of tense is concerned, this form is not unlike the periphrastic perfect in *āsa* in Sanskrit.

2. Perfects in *vi* and *ui*, as *amavi* and *monui*, are regarded by all scholars whose authority we are accustomed to follow, as compounds of the auxiliary verb *fui*, and need only this mention from us. These again are perfects because the auxiliary is a perfect belonging to the *i* class and formerly

reduplicated as already explained. These also, you observe, as far as the tense element is concerned, are not unlike the Sanskrit periphrastic perfects in *babhūva*, root *bhu*, Greek *φν*, Latin *fu*.

3. The foregoing complete the list of synthetic perfects in Latin; but later there arose certain analytic forms which may be mentioned in this connection. (1). In the passive voice the perfect is expressed by the perfect passive participle in *tus* and the present of the verb *es* 'to be,' as *amatus est* or (of neuter verbs) *ventum est*. Here the perfect signification was acquired in the same manner as in the corresponding forms in *tas* in Sanskrit as already explained. In this expression a transfer of thought has taken place similar to that which the analytic forms denoting possession underwent. In the one case we have the predication of the present possession of an object in a certain condition, in the other the predication of the present existence of a subject in a similar condition, said condition in both cases implying the previous action. In neither case has the auxiliary—'to have' or 'to be'—had any influence whatsoever in raising the form to the rank of a perfect. As far as the auxiliaries are concerned, both forms would have remained a *present*. The basis upon which the idea of completed action has been reared is the condition denoted by the participle. Starting from the same point, both expressions by a like process have reached the same goal. This process has been more fully illustrated under the Sanskrit forms in *vān*. As to the question whether the Latin ever possessed a synthetic perfect passive, which was afterwards supplanted by this analytic form, it cannot be established by any proof drawn from Roman literature. As, however, the Sanskrit and the Greek possess such forms, we should infer that they existed in the mother-tongue before the separation, and that there was probably a time in the history of Italic speech when such a form was in use; but no trace of it has been left.

(2). There also arose, in both the active and the passive voice, a so-called periphrastic perfect, formed by the perfect *fui*, and in the active the future active participle, as *amaturus fui*, in the passive the gerundive participle, as *amandus fui*.

These participles are used with the verb *esse* throughout all its moods and tenses. The perfects are perfects by virtue of the auxiliary.

(3). Still one other form appears, the prototype of the modern analytic form with *avoir* in French, made up of the perfect passive participle in agreement with the object and the present of the verb *habere*. Thus in Cic. Div. 2, 70, 145. we read: *innumerabilia, quae collecta habent*, ‘which they have collected.’ This form was used, though sparingly, in all the periods of Latin literature and its rise may be explained precisely as that of those in *vān* in Sanskrit, to which it is similar.

In regard to the chronological development of these different perfect formations in Latin, we cannot, of course, determine with any degree of accuracy, as we have not here so extended a literary history as in the Sanskrit, throughout which we may trace the rise of new forms. In all periods of the literature we find all these forms used side by side, and without any apparent increase or decrease in the use of any one of them. The reduplicated forms are, without doubt, the most primitive; those in *si* seem to contain evidences of antiquity which entitle them to the second place, though *secundus longo intervallo*; those in *vi* and *ui* probably arose next, and the analytic forms would naturally be developed last.

In connection with the Latin perfect, we should call attention to the fact that all these forms have, besides the signification of the perfect, also that of an aorist. Whether the Latin originally possessed an aorist form like its two sister branches and afterwards lost it, and the perfect gradually assumed its functions, cannot be determined from the material at our command. From its earliest to its latest literary records, the Latin uses this tense with this two-fold signification. There is no doubt but that an aorist form had already become established in the mother-tongue before the breaking up of the family, and that the different branches at the separation carried away uses of it; but all, except the Sanskrit and the Greek, very early lost it.

Resumé. Of these three languages which received by inheritance the reduplicated perfect, we see then that: I. The

Sanskrit, while preserving the form in use, has lost entirely its original meaning, and has developed three new and distinct forms: 1. The periphrastic perfects with *āsa*, *babhūva*, and *śakāra*. 2. The analytic perfects with the perfect passive participle in *tas*. 3. The analytic perfects with the perfect active participle in *vān*.

II. The Latin has lost the form almost entirely, and has retained the signification only in part, while five new forms have appeared.: 1. Perfects in *si*. 2. Perfects in *vi* and *vi*. 3. The analytic perfects with the perfect passive participle in *tus*. 4. The analytic periphrastic perfects with the future participles and a perfect of the auxiliary. 5. The analytic perfects with the perfect passive participle and the auxiliary *habēre*.

III. The Greek discovers a most remarkable history, showing its superiority here as in all other parts of its verb. Throughout a long literary career it has preserved both its form and its signification entire.